

2851 GTA TGT CTG CTG TAC GAT CAG TGG GTA CTG TCC CCG CCG CAC AAA AAA GAA CGT GTT AAC 2910
73 V C L L Y D Q W V L S P P H K K E R V N 92

2911 CAC CTG GGT AAC CTG GTA ATC ACC TGG GGC GCC CAG ACT TTC AAA CAC CAA GCT TTC AAC 2770
93 H L G N L V I T W G A Q T F K H Q A F N 112

2971 AAA CTG GCT AAC CTG TTC ATC GTT AAC AAC AAA AAA ACC ATC CCG AAC AAC CTG GTT GAA 3030
113 K L A N L F I V N N K K T I P N N L V E 132

3031 AAC TAC CTG ACC CCG ATG TCT CTG GCA TAC TGG TTC ATG GAT GAT GGT GGT AAA TGG GAT 3090
133 N Y L T P M S L A Y W F M D D G G K W D 152

3091 TAC AAC AAA AAC TCT ACC AAC AAA TCG ATC GTA CTG AAC ACC CAG TCT TTC ACT TTC GAA 3150
153 Y N K N S T N K S I V L N T Q S F T F E 172

3151 GAA GTA GAA TAC CTG GTT AAG GGT CTG CGT AAC AAA TTC CAA CTG AAC TGT TAC GTA AAA 3210
173 E V E Y L V K G L R N K F Q L N C Y V K 192

3211 ATC AAC AAA AAC AAA CCG ATC ATC TAC ATC GAT TCT ATG TCT TAC CTG ATC TTC TAC AAC 3270
193 I N K N K P I I Y I D S M S Y L I F Y N 212

3271 CTG ATC AAA CCG TAC CTG ATC CCG CAG ATG ATG TAC AAA CTG CCG AAC ACT ATC TCC TCC 3330
213 L I K P Y L I P Q M M Y K L P N T I S S 232

3331 GAA ACT TTC CTG AAA TAA (SEQ ID NO:1)
233 E T F L K * (SEQ ID NO:2). --

On page 7, beginning on line 2 and ending at the bottom of the page, replace paragraphs 1-11 with the following new paragraphs:

-- This invention will be more fully described with reference to the drawings in which:

Fig. 1 depicts the universal code equivalent of the mitochondrial I-SceI gene (SEQ ID NO:1).

Fig. 2 depicts the nucleotide sequence of the invention encoding the enzyme I-SceI and the amino acid sequence of the natural I-SceI enzyme (SEQ ID NOS: 5 and 2).

Fig. 3 depicts the I-SceI recognition sequence and indicates the possible base mutations in the recognition site and the effect of such mutations on stringency of recognition (SEQ ID NOS: 6, 7, and 8).

Fig. 4 is the nucleotide sequence and deduced amino acid sequence of a region of plasmid pSCM525. The nucleotide sequence of the invention encoding the enzyme I-SceI is enclosed in the box (SEQ ID NOS: 9 through 16).

Fig. 5 depicts variations around the amino acid sequence of the enzyme I-SceI (SEQ ID NO: 2).

Fig. 6 shows Group I intron encoding endonucleases and related endonucleases (SEQ ID NOS: 17-44).

Fig. 7 depicts yeast expression vectors containing the synthetic gene for I-SceI.

Fig. 8 depicts the mammalian expression vector PRSV I-SceI.

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